

03000 CONCRETE

DESIGN

- A. All structural calculations, drawings, and mix designs for cast-in-place, structural precast and architectural precast concrete shall be prepared under the supervision of a Professional Engineer (PE) licensed by the Commonwealth of Virginia. All drawings, calculations, and mix designs shall be signed and sealed by a PE licensed in the Commonwealth of Virginia. Specifications shall require the Contractor to provide PE certification of shop drawings, calculations, and mix designs.
- B. Designer of cast-in-place and precast concrete elements shall comply with all requirements of FCSIM.
- C. Project specifications shall state that the Contractor is not authorized to proceed with manufacture or procurement of cast-in-place or precast elements until applicable shop drawings, mix designs and color samples are approved; and any required mock-ups are constructed and approved.
- D. Contractor is responsible for all concrete inspections, except for tests/inspections performed by the Owner when the building is classified as a critical structure.
- E. Calcium chloride is not permitted in concrete used for reinforced concrete pipe or structures for drainage or drainage structures as per VDOT.
- F. Mix design for sidewalks, curb and gutter, and other site work concrete shall meet VDOT mix design specifications.
- G. Where concrete work abuts the building structure, plans will specify that the expansion joint will be caulked with a caulking that contains polyisocyanate prepolymer.

SHOP DRAWING:

- A. Project specifications shall require the Contractor to provide shop drawings for all cast-in-place, structural precast and architectural precast concrete, and all mix designs and connection details which are signed and sealed by a PE licensed in the Commonwealth of Virginia, as required by the FCSIM. Any documents which are required to be signed and sealed by a PE by the FCSIM which are not identified as a requirement of the Contractor in the specifications shall be considered to be a requirement of the Architect and the Structural Engineering Consultant.
- B. Project specifications shall require that all structural precast or architectural precast elements be manufactured at a precast plant which is a certified member of the Pre-stressed Concrete Institute (PCI) and is operated under the supervision of a PE licensed by the Commonwealth of Virginia.